

## BIOMETRIC SENSING DEVICE WITH ISOLATED PIEZO CERAMIC ELEMENTS

### ABSTRACT OF THE DISCLOSURE

The present invention provides an apparatus for sensing biometric information in a finger with piezo ceramic elements. In one embodiment, the apparatus includes an array of discrete piezo ceramic elements and filler. The array of discrete piezo ceramic elements is responsive to acoustic characteristics of parts of the finger. The filler is distributed between the discrete piezo ceramic elements and provides acoustic attenuation and electric isolation between the discrete piezo ceramic elements. A protective layer can receive a ridge pattern of the finger positioned proximate to the array. Air in valleys between ridges of the ridge pattern of the finger acts as an acoustic barrier. A backing layer (air or foam) can also be provided.

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